

Before you climb

- 1) Book a guide, porter (if wanted) and accommodation at the overnight Mt. Huts, through the Park's Head Office in Kota Kinabalu. Reservations cannot be made at the Park Headquarters itself. Also book transport to take you to the end of the Power Station Road where the climb starts if you do not have your own car.
- 2) Come to the Park Naturalists programmes at Park Headquarters, they will tell you about the climb and advise you what to take. The programmes are FREE so do take advantage of them.
- 3) Make sure you have good shoes. Tennis or gym shoes are fine.
- 4) Bring enough *warm* clothing. The temperature can fall to below freezing point at night. Pack *all* clothes in plastic bags to keep them dry in case of rain. Sleeping bags are provided at the Mt. Huts.
- 5) Bring something wind and water-proof.
- 6) Take a waterbottle with you.
- 7) Take some high-energy foods for the climb. e.g. chocolate, nuts, raisins. Glucose sweets are good.
- 8) Have a good torch-light.
- 9) Bring gloves and a hat.

If you get wet on the way up you will need a complete set of dry clothes and a second pair of shoes or a pair of sandals. Headache tablets, paper tissues, a couple of plastic bags and some plasters for cuts or blisters are all useful.

For reservations and further information please contact:



The Director,
Sabah Parks.
P.O. Box 10626,
88806 Kota Kinabalu,
Sabah, Malaysia.
Tel: 211585, 211652, 211881



TDC-SABAH (Information only)
Block L, Lot 4,
Bandaran Sinsuran, Mail Bag 136,
88700 Kota Kinabalu.
Tel: 088-211698, 211732
Telex: 80614 TDC BKI.

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Text by Anthea Philipps

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Illustrations by Karen Philipps

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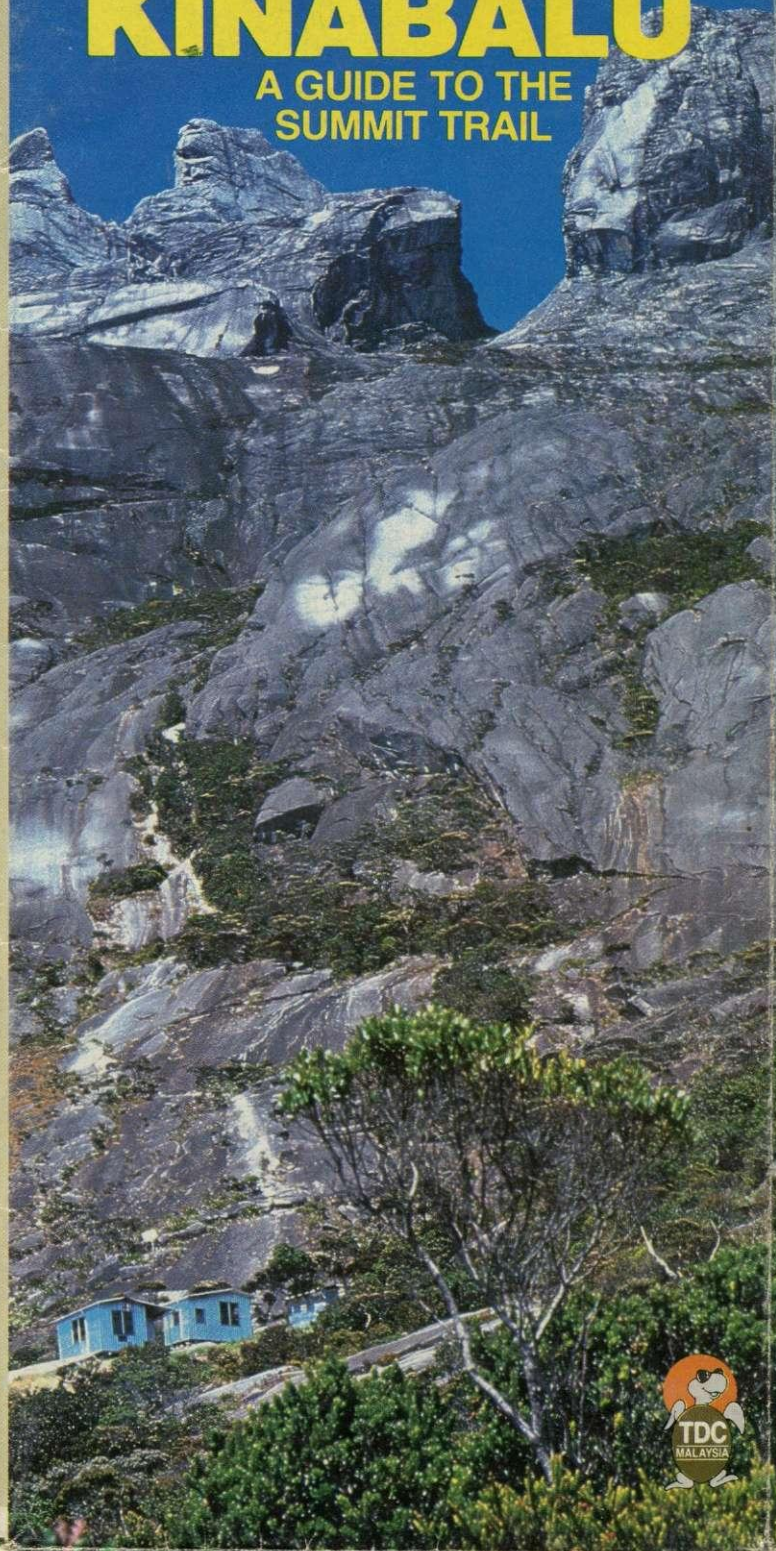
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NOT FOR SALE

**TRAFFICKING IN ILLEGAL DRUGS
CARRIES THE DEATH PENALTY**

MOUNT KINABALU

A GUIDE TO THE SUMMIT TRAIL



A GUIDE TO THE SUMMIT TRAIL

ABOUT THIS PAMPHLET

This pamphlet was produced in response to a demand for more information about the climb to the summit of Mt. Kinabalu. We have tried to illustrate the plants and animals you are most likely to see, as well as others of special interest.

Many species do not have familiar common names, and in these cases, we have coined a name that is, we hope, descriptive or at least, obvious. Universally-used scientific names have also been included. Capital letters indicate an illustration.

INTRODUCTION

The Kinabalu Park is famous the world over for the highest mountain in South-East Asia – Mt. Kinabalu, a vast jagged granite massif rising to 4,101m. (13,455ft.). The mountain is the focal point of the whole Park which covers an area of 754 sq km (291 sq miles), and includes vegetation types ranging from the rich lowland dipterocarp zone through the montane oak, rhododendron, and conifer forests to the alpine meadow plants and stunted bushes of the summit zone – an area that probably has one of the richest flora in the world.

The Headquarters is situated on the southern boundary, at an elevation of 1,524m (5,000 ft). Visitor accommodation, restaurants and an exhibit centre are found here as well as the Park offices. It is only a 2 hour drive from Sabah's capital of Kota Kinabalu on a good sealed road and the Park is an ideal spot for day visitors who simply want to get away from it all and enjoy the cool air, as well as those who wish to stay for a few days and climb the mountain or explore the forest trails.

If you are a first-time visitor it is well worth your while to go to some of the free visitor programmes organised by the Park. Regular evening slide/film shows and guided trail walks in the mornings are given by the Park Naturalists at the Park Headquarters.

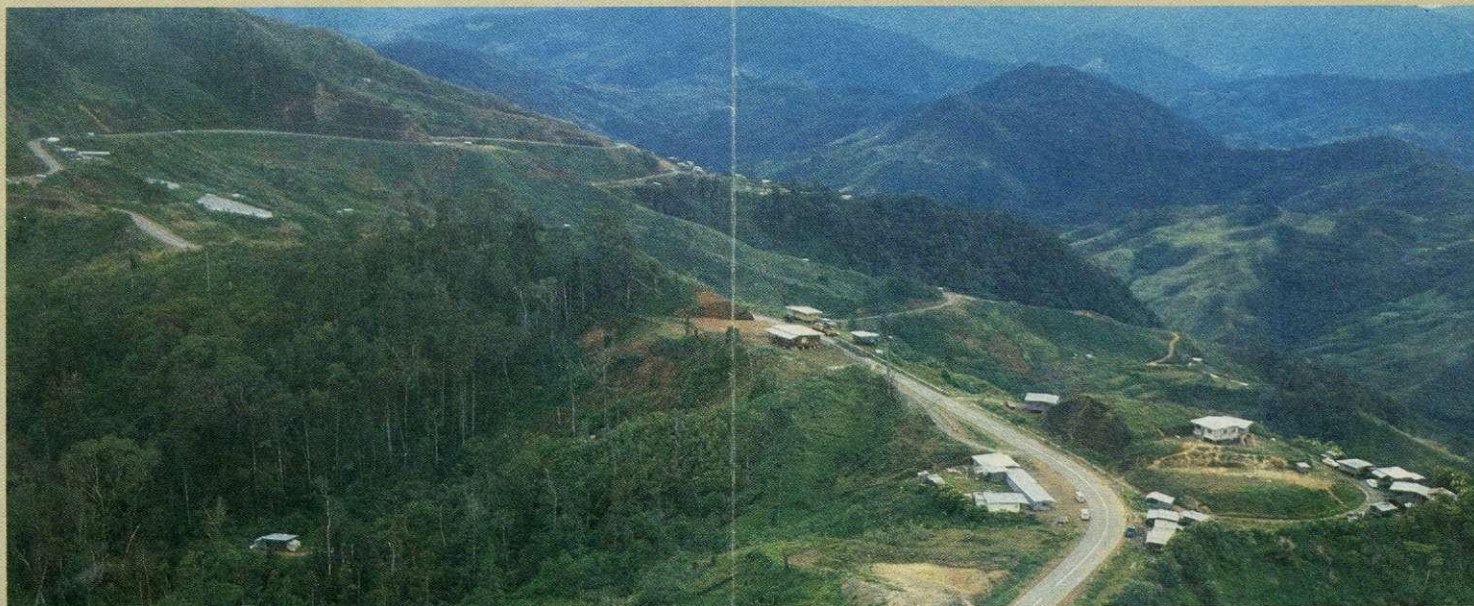
Many people who visit the Park come to climb the mountain, a tough walk that takes a minimum of two days. But why not take your time over it? The climb can be made far more rewarding and enjoyable if you use three days, with two nights at a mountain hut. This way you can take the time to look at what you pass – the birds, the animals, the rocks and the soil, the views; and the almost incredibly rich diversity of plant life belonging to one of the most ancient vegetations in the world.

THE SUMMIT TRAIL

To reach the start of the Summit Trail climbers must drive or walk the 4kms (2½ miles) of the Kamborongoh Road that leads from Mt. Kinabalu Park Headquarters to the Public Works Department's Power Station at 1,829m (6,000ft.).

The forest on the steep ridge opposite the Power Station is still the montane oak-forest that surrounds the Park Headquarters. Kinabalu has some of the richest oak forests in the world with over 40 different oak species recorded. Here the Summit Trail itself starts, marked at intervals of 5 chains (50 chains = 1 km.; 80 chains = 1 mile), leading past the Power Station and following the crest of a narrow ridge that dips down onto the main slopes of Kinabalu itself. A little further on, there is a waterfall where waterbottles can be filled. This is known as Carson's Falls, named after the first Warden of this Park. Liverworts and mosses grow luxuriantly in the fine spray of water. A common moss is Dawsonia, one of the largest in the world, that can reach 3ft (1m) in height, though it is usually much less. Nearby the KINABALU BALSAM (*Impatiens platyphylla*) can usually be found, a delicate little herb growing in between rocks at the edge of the path. Rhododendrons are now more common – the SLENDER-LEAVED RHODODENDRON (*Rhododendron stenophyllum*) is a lovely sight in bloom.

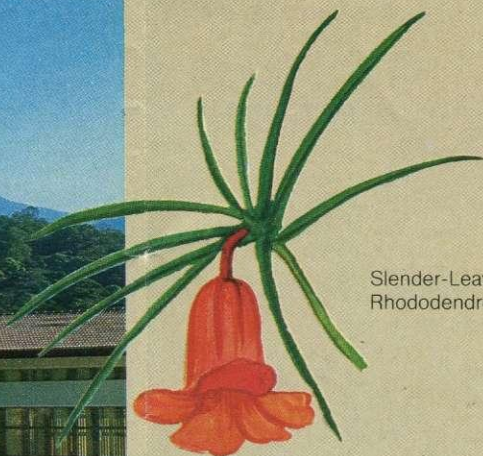
The SMALL MOUNTAIN PITCHERPLANT (*Nepenthes tentaculata*) can also be seen by the sharp-eyed observer. It grows along the edges of paths, from the Headquarters to as high as 2,439m (8,000ft).



Kota Kinabalu – Ranau Highway to the Park



New Administration Building



Slender-Leaved
Rhododendron



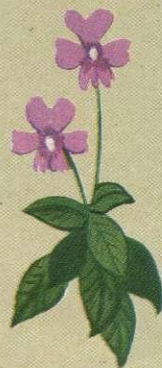
Small Mt. Pitcher Plant



First Shelter

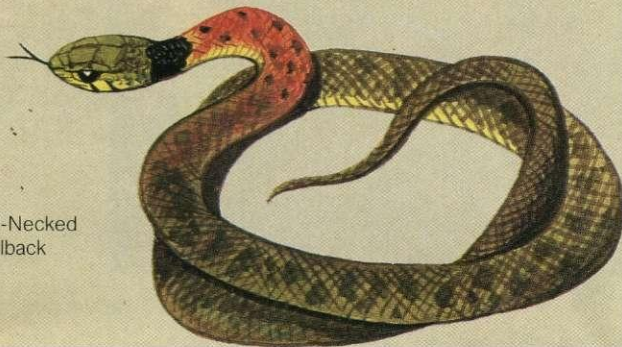


Climbers on Summit Trail



Kinabalu Balsam

Beyond Carson's Falls the trail starts to climb, and those who move quietly and are lucky may come across the occasional snake sunning itself on the path. The harmless RED-NECKED KEELBACK (*Natrix subminiata*) is one of the commonest, though other species may also be seen. Soon the path climbs steeply up a series of steps formed out of tree-roots to reach the ridge at 1,951m (6,400ft). Here is the First Summit Trail Shelter where one can stop. This is a good place to rest, and look back down the road that links the Park with the town of Kota Kinabalu on the West Coast.



Red-Necked
Keelback



A Mossy Bank



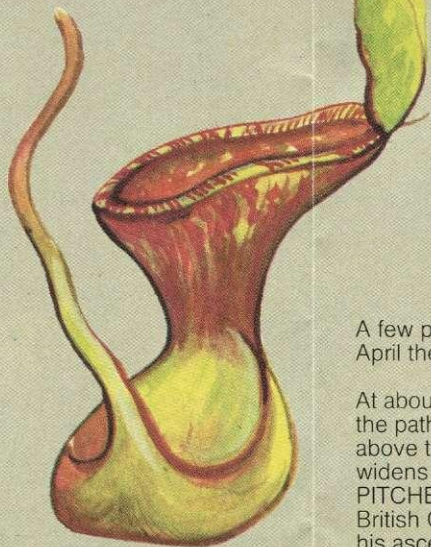
Club-Moss



Copper-Leaved Rhododendron

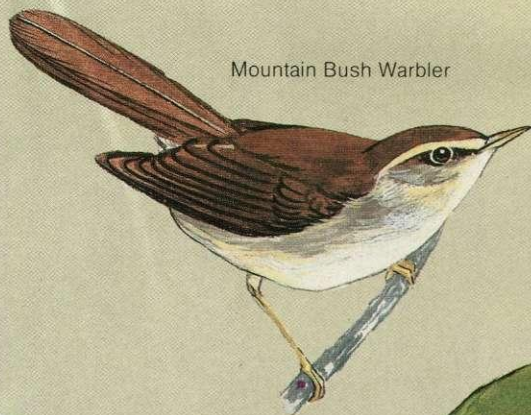


Golden Rhododendron

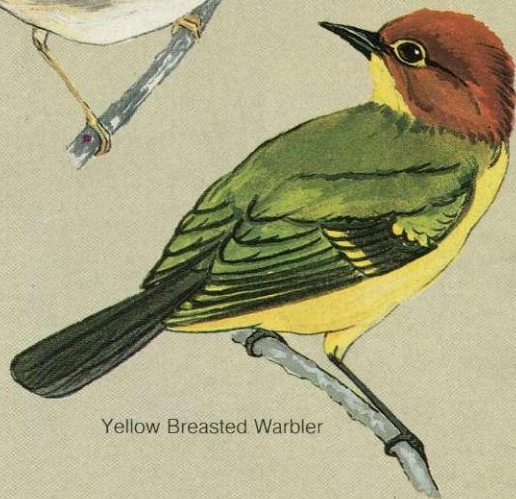


Low's Pitcher Plant

The Mossy or Cloud Forest Zone starts around this altitude. Tree-trunks are gnarled and twisted and their branches loaded down with mosses, epiphytic ferns and orchids. Though orchids are common on the trail the flowers of many are small and inconspicuous and can easily be overlooked. The main flowering season is from October to January. Species of the Rhododendron family are also common here. They usually flower above eye-level so you must look up into the trees to see them. The COPPER-LEAVED RHODODENDRON (*Rhododendron fallacinum*), with orange flowers is one of the most conspicuous. Its leaves are very distinctive, being covered with coppery-golden scales on the underside.



Mountain Bush Warbler



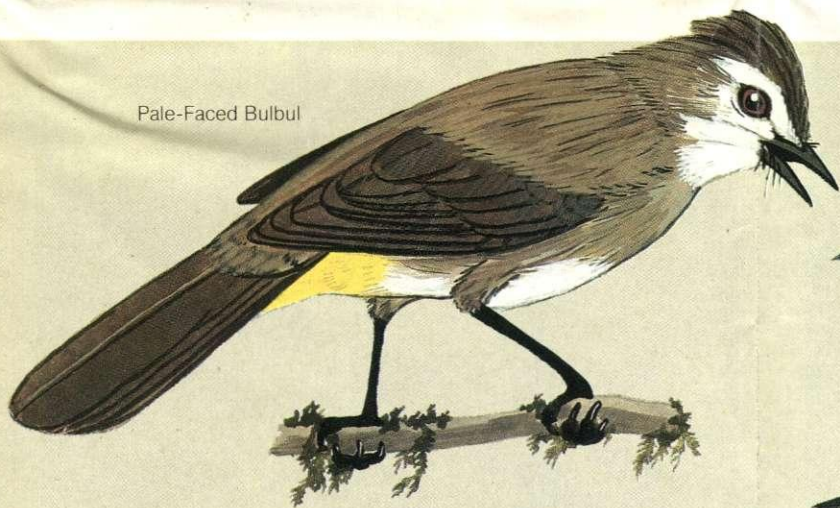
Yellow Breasted Warbler

A few plants usually flower throughout the year, but in February to April they are in full bloom and at their best.

At about 2,134m (7,000ft), the Second Shelter is passed, after which the path climbs a steep narrow ridge, and, for a short time, comes out above the tree canopy, before the ridge broadens again and the path widens as it dips back into mossy forest. This is the zone of LOW'S PITCHER-PLANT (*Nepenthes lowii*), named after Sir Hugh Low, a British Colonial Officer who, in 1851, became the first person to record his ascent of the mountain. Pitcher-plants are oddities of the plant world; so-called because the end of each leaf is modified into a 'pitcher' – a container of liquid which attracts unwary insects. These drown and as they dissolve, their nutrients are absorbed by the plant. Most species grow in areas where the soil is poor, lacking in nutrients, and this ingenious method of obtaining nourishment has evolved to allow them to thrive in such places. This species has a graceful, flared pitcher, 20-23 cms (8-9 ins) in length, and is probably one of Kinabalu's most well-known plants. Though formerly common here, picking of the pitchers and uprooting of the plants themselves in the past, has sadly reduced the population.

The mossy forest continues on past Kamborongoh (the Sabah Telecoms Station) at 2,225m (7,300ft), where a narrow track leads up to the transmitters on the left. The name is derived from a plant locally called 'kamborongoh', in the Dusun language, that is used to ward off evil spirits. The site is a restricted entrance area. On the right the Summit Trail continues along the side of the ridge past an old landslide and up onto the ridge itself to the Third Trail Shelter, at more or less the same elevation as the Telecoms Station. A few yards further on the path divides. The left is a steep staircase leading up to the Sabah Radio and Television Stations at Layang-Layang, at 2,591 (8,500ft). This is another restricted entrance area. 'Layang-Layang' in the Dusun tongue means 'Place of Swallows'.

Pale-Faced Bulbul



The Summit Trail continues on the right, through the bamboo forest where Miss Gibbs's Bamboo (*Bambusa gibbsiae*), a tall-climbing, delicate plant, drapes the trees like moss. Miss Lilian Gibbs was a botanist attached to the British Museum. She visited Sabah in 1910 and became the first woman to make the ascent. Many of the plants she collected were new to science, and several are named after her.

Tree-ferns of several species are common. Look out here for little birds flitting or creeping through the bamboos and ferns. Perhaps two of the easiest to identify are the YELLOW-BREASTED WARBLER (*Seicercus montis*), a small bird, yellow with a chestnut head, up to 10cm (4") in size; and the MOUNTAIN BUSH WARBLER (*Cettia montanus*), 12½cm (5") in size, brown with a distinctive pale eye-stripe. A well-known but rather inconspicuous species is the KINABALU FRIENDLY WARBLER (*Bradypterus accentor*), so-called because of its habit of hopping about at the feet of the early climbers. It is a reddish-brown bird, 15cm (6") in size, with a spotted breast that is found only on Sabah's three highest mountains – Kinabalu, Tambuyukon to the north, and Trus-Madi to the south-east. Sadly it is now rather uncommon and not nearly so friendly. In 1970 it was reported as "Not seen so often as in the past. The great number of climbers now walking the mountain trail have probably driven the birds to quieter areas". Another bird that can be seen here is the PALE-FACED BULBUL (*Pycnonotus flavescentis*), a brown bird about 17½ cm (7") in size with a distinctive white face and a deep-yellow vent. Many of the birds around the Park Headquarters can also be seen here.



Carson's Camp



Mountain Blackeye

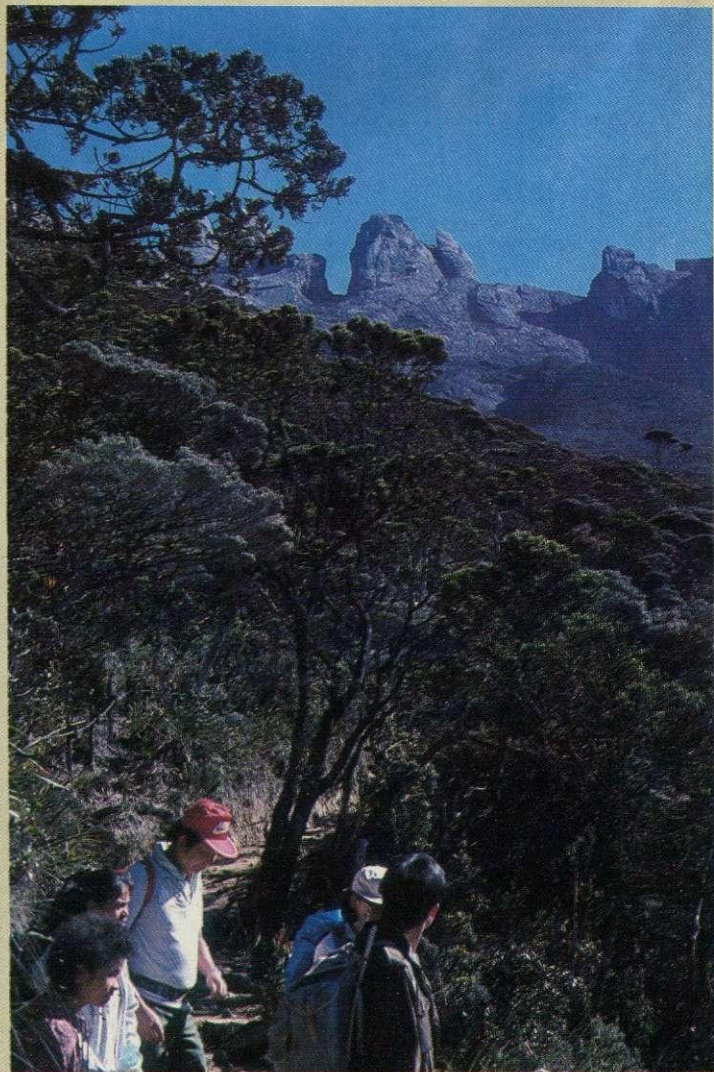


Kinabalu Friendly Warbler

Soon after leaving the bamboo forest and the Fourth Shelter Carson's Camp is reached at 2,651m (8,700ft). This is a small clearing on the ridge crest with an abandoned hut where wild raspberries (*Rubus lineatus*) grow in profusion. It is a good place to stop and have lunch and relax in the cool mountain air.

At about 2,438m (8,000ft) one first sees LOW'S RHODODENDRON (*Rhododendron lowii*), with magnificent heads of large peachy-yellow blooms, up to 30cm (12") across. The main flowering season for Rhododendrons seems to be November to January, though a few can be seen flowering almost all the year round. The GOLDEN RHODODENDRON (*Rhododendron retivenium*) is also seen in the bamboo forest but lower down. The pure yellow flowers of this species are easy to confuse with Low's Rhododendron but the leaves of the Golden Rhododendron are smaller and much narrower.

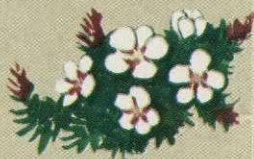
From Carson's Camp the trail climbs steeply over an out-crop of ultrabasic rocks. These rocks give rise to a distinctive yellow, almost orange-coloured soil containing an unusually high concentration of toxic elements such as nickel or chromium. Only plants that have adapted to tolerate these elements will survive. Consequently, the vegetation changes abruptly as the LEPTOSPERMUM or TEA-TREE (*Leptospermum recurvum*), locally called 'sayat-sayat', a shrubby tree



View of Peak



Low's Rhododendron

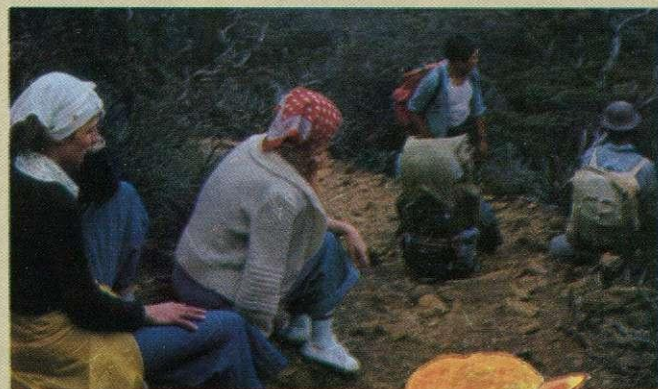


Leptospermum

with small greyish leaves and starry white flowers; and the Southern Pine (*Dacrydium gibbsiae*), one of the southern hemisphere conifers, become the most abundant trees. The large and ornate MOSSY PITCHER-PLANT (*Nepenthes villosa*), up to 25 cm (10") long is fairly common in this locality by the side of the trail, the pitchers often half-buried among roots in moss and leaf litter. The delightful little green MOUNTAIN BLACKEYE (*Chlorocharis emiliae*), with a distinctive black eye can often be seen in this area and as far up as 3,810m (12,500ft) dipping its beak into the rhododendrons and other flowers.

Just before the Fifth Trail Shelter at 2,896 m (9,500 ft) one climbs over the first rock outcroppings, to a view looking back down the mountain towards the Park Headquarters. On a clear day, glimpses of Kinabalu's jagged peaks, towering far above, can be seen through the trees ahead. Here compact bushes of STAFF'S VACCINIUM (*Vaccinium stapfianum*) with conspicuous showy red young leaves, and the HEATH RHODODENDRON (*Rhododendron ericoides*) begin to appear. The small red tubular flowers and tiny leaves of the Heath Rhododendron are distinctive and it is found only on Kinabalu.

Shortly before the Sixth Trail Shelter is reached there is a short track leading off to the right to a helipad. If the sky is clear, a really magnificent view of Kinabalu can be seen from here and it is well worth spending an extra 10-20 minutes on this detour. Ten minutes walk further on brings you off the ultrabasic soil and to the Sixth Trail Shelter at 3,109m (10,200ft).



Climbers on Summit Trail



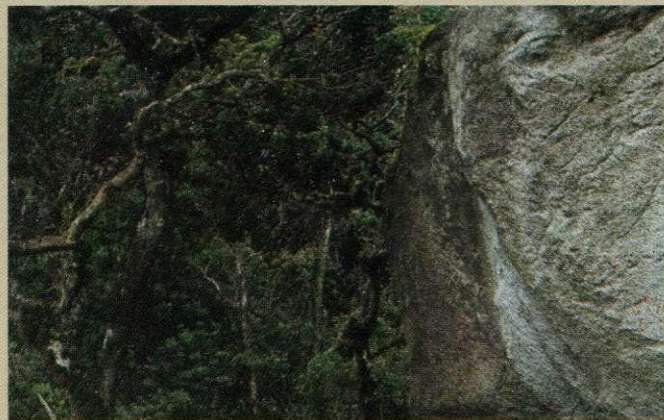
Heath
Rhododendron

Mossy Pitcher Plant



The Paka Cave, really a large overhanging rock by a swift-flowing rocky stream, is situated near here on a slight detour to the left of the main trail. This 'cave' was where the first explorers used to spend the night before climbing to the summit the next day. The large red-breasted MOUNTAIN BLACKBIRD (*Turdus poliocephalus*) is seen most frequently here and higher up at Panar Laban, though it does occur at lower altitudes also.

From the Fifth Shelter the path follows a gully with orchids and rhododendrons in abundance. The BOX-LEAVED RHODODENDRON (*Rhododendron buxifolium*) is in full bloom from February to April and its crimson flowers can be seen dotting the stunted vegetation round Panar Laban at this time. Another common species is the ROUGH-LEAVED RHODODENDRON (*Rhododendron rugosum*) with distinctive pinky-purple flowers.



Paka Cave



Mountain Necklace Orchid

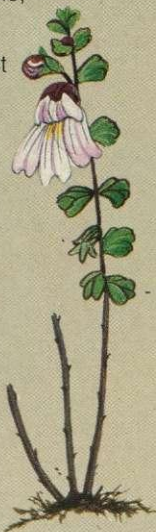


Young Leaves of Stapf's Vaccinium

Large areas of granite rock soon begin to appear and at about 3,353m (11,000ft), the edge of the tree-line, Panar Laban is reached. Most people stay overnight here at the Laban Rata Resthouse where electricity, hot water, room heaters and a canteen are available, before climbing to the summit the next morning. The name Panar Laban is derived from a corruption of the Dusun word meaning 'Place of Sacrifice'. Here the first explorers stopped to sacrifice a white cockerel and seven eggs to appease the mountain spirits. Today, the sacrifice is still carried out once a year. There are also three other mountain huts in this area with mere basic facilities.



Rough-Leaved Rhododendron



Borneo Eyebright



Borneo Mt. Ground Squirrel



If you are climbing to the summit – a word of warning. Mountains should be treated with respect and you climb Kinabalu at your own risk. The weather can change very quickly from brilliant sunshine, to mist and clouds, to a torrential down-pour. The nights at Panar Laban and Sayat-Sayat are cold and temperatures can drop to below freezing. Ensure you bring enough warm clothes with you and pack them in plastic bags to keep dry. Park Regulations require that all climbers to the summit are accompanied by a registered guide.



From Panar Laban onwards the vegetation is stunted and scrublike except in the gullies, and there are superb views of the great garnite peaks soaring high above. *Leptospermum* and the Heath *Rhododendron* are abundant and occur almost all the way to the summit. In open ground below the granite slopes small alpine meadow plants can be found. The white-flowered BORNEO EYEBRIGHT (*Euphrasia borneensis*) and the pinkish-white MOUNTAIN TRACHYMENE (*Trachymene saniculifolia*) are common. The well-known KINABALU BUTTERCUP (*Ranunculus lowii*) can be seen in wetter areas, especially by the old Panar Laban huts.

Do not confuse the yellow flowers of the Buttercup with the Mountain Potentillas. Their leaves are very different. The SILVER POTENTILLA (*Potentilla borneensis*) with soft, hairy leaves is the most distinctive, of the three species. It is common around Burlington Hut.



Kinabalu Buttercup

The most conspicuous creature at these altitudes is the BORNEAN MOUNTAIN GROUND SQUIRREL (*Dremomys everettii*) which is often seen scampering about in the scrubby vegetation. The KINABALU RAT (*Rattus baluensis*) is another well-known species which is found only on the mountain. It has dark grey woolly hair.

From Panar Laban the path follows another gully up to Sayat-Sayat, named after the abundant 'sayat-sayat' or *Leptospermum* bushes. At 3,810m (12,500ft), this is the highest place on the mountain where one can stay. A lovely white-flowered orchid, the Mountain Necklace Orchid (*Coelogyne papillosa*), covers the rock crevices like drifts of snow when in full bloom in November.



Laban Rata Resthouse



Mountain Trachymene



Silver Potentilla



Kinabalu Rat



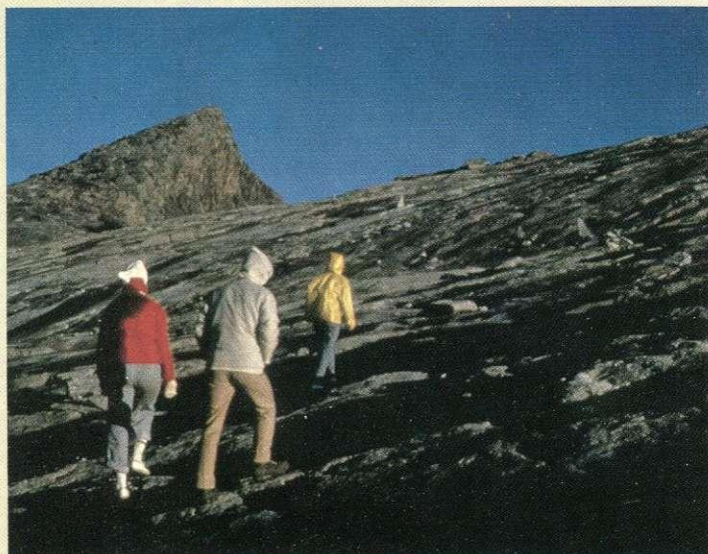
Mountain Blackbird



Sayat-Sayat Mountain Huts

Beyond Sayat-Sayat begins the Summit Plateau itself – a vast expanse of grey granitic slopes. Granite is a rock composed of various minerals which differ in their resistance to erosion and weathering. The result is a distinctive rough pitted surface, speckled with white, grey and black. Cairns mark the trail that leads slowly upwards between South Peak and St. Johns Peak on the left and the Donkey's Ears and the Ugly Sisters on the right. The Summit itself, Low's Peak, is not visible until the upper part of the Summit Plateau is reached.

The geological history of Mt. Kinabalu goes back some 9 million years when the granite core was solidifying beneath the earth's crust. Less than one million years ago this granite massif was forced upwards through the crust and is now exposed as the result of the removal, by erosion, of thousands of feet of overlying sand and mudstone rocks. During the Ice-Age, 10,000 to 100,000 years ago, the summit area was covered by a shining cap of ice, with a major glacier flowing north down Low's Gully and minor glaciers to the east, south and west, gradually smoothing out the Summit Plateau except for the jagged



The Summit Plateau

peaks that stood out above the ice surface. The ice melted less than 10,000 years ago and many signs of the glaciation can still be seen on the Summit Plateau. Glacial striations, usually less than an inch deep, and the larger glacial grooves were cut by rocks underlying the glacier as the ice moved slowly downwards. Post-glacial weathering has rounded and smoothed these and other features such as the frost-shattered block-field of Low's Peak, and the bands or dykes of different types of rocks that run across the granite. Exfoliation, (layers of rock peeled off parallel to the surface), can also be seen. This is caused by the alternate expansion and shrinkage of the rock as it heats up during the day and cools down at night.

Today, only occasionally does ice form in the pool below the summit where the early climbers made further sacrifices to the spirits of the mountain.



The Donkey's Ears



The Sacrifice Pool



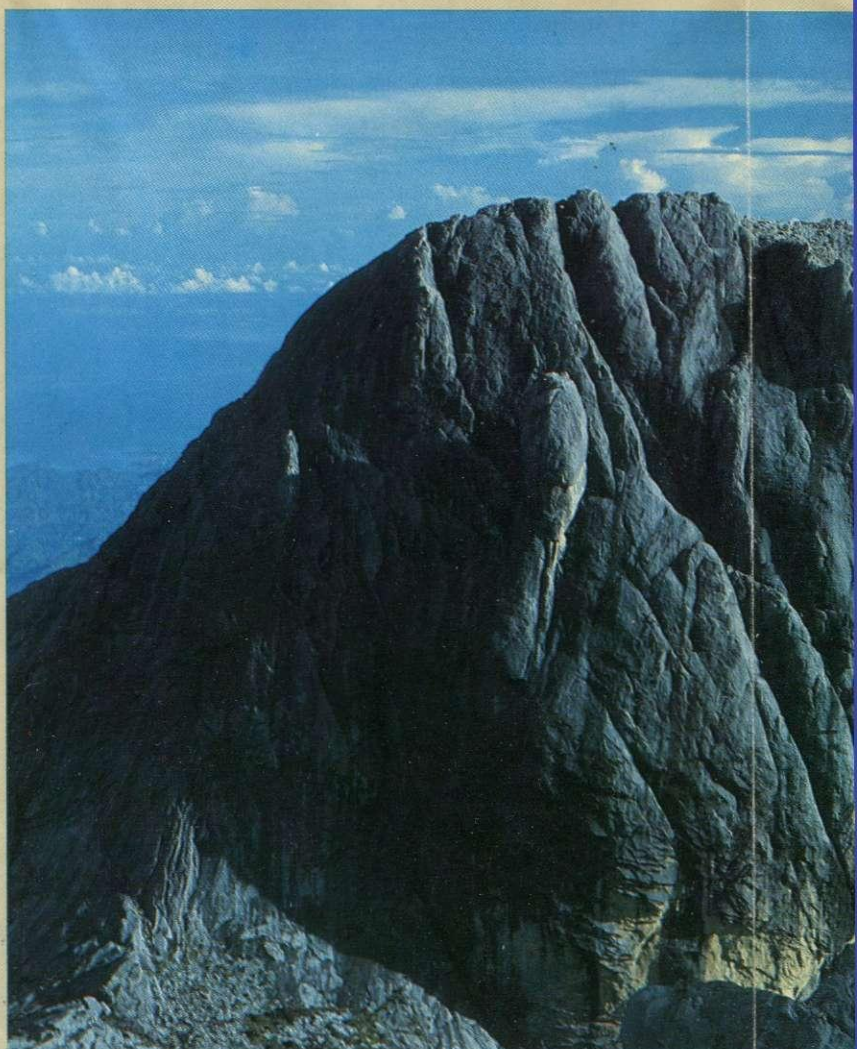
Successful Climbers



South Peak

Any plants on the Plateau are reduced to clinging to cracks in the rocks, as the force of the water rushing down the slopes after rain washes away any soil that may be forming, making it impossible for most plants to live there. Near the top of the Summit Plateau and at the base of Low's Peak are a few small sunken patches of sand which support grasses and sedges. In the crevices the most common flowering plants are the stunted Heath Rhododendron and Leptospermum, maturing, flowering and fruiting when only a few inches high. Few birds are seen up here but there are magnificent views, especially of the awesome cliffs of Low's Gully, a 1¼km (1 mile) deep cleft that divides the east and west arms of the mountain.

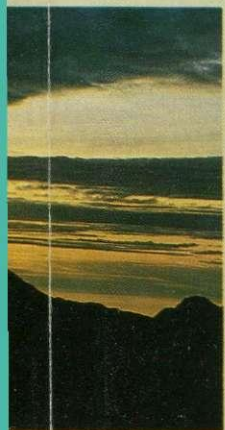
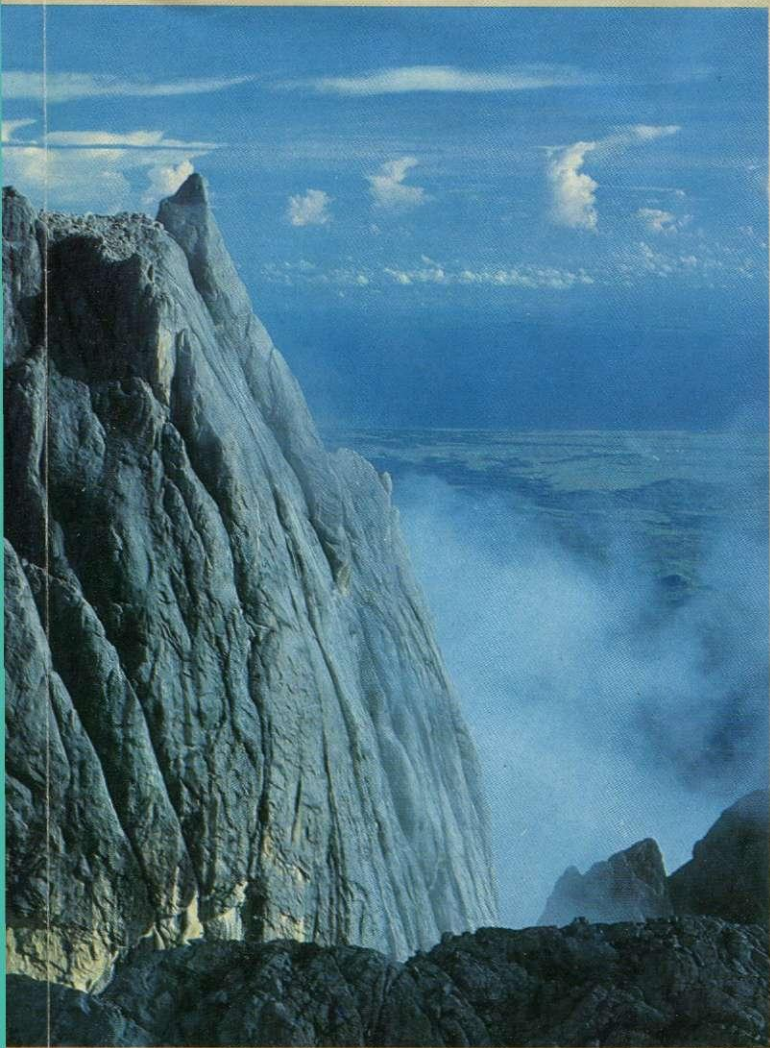
Most people climb to the summit in time to see the sunrise and dawn creep slowly over the land, illuminating the coast-line west and north and the dim ranges of hills to the south. In good weather almost all of Sabah can be seen before the clouds come up (usually around 9.00 or 10.00 am) and it is time to begin the descent.



Victoria Peak



Sunrise from Summit Plateau



Mt. Kinabalu is a very special part of Sabah. Set aside by the government in a National Park, it is part of Sabah's Natural Heritage, to be preserved and protected for ever. You and your children should always be able to experience the grandeur of the mountain, to explore and discover its secrets, to appreciate and understand its value as part of your heritage. The Park can survive only with your cooperation. Removal of plants, insects, and animals lessen the opportunity for all to see and enjoy. Writing on rocks and trees reduces the pleasures and experiences of others. Litter and garbage have no place along roadsides and trails. Please help us to protect the Park and familiarise yourself with the Park regulations:



View from Panar Laban



Mt. Kinabalu after rain

Park Regulations

Please follow the Park's regulations while you are in the Park. Under the Sabah - Parks Enactment of 1984 it is an offence to:

- 1) kill, capture, disturb or remove any animal, nests or eggs.
- 2) remove, damage or set fire to any vegetation or any object of geological, historical or other scientific interest.
- 3) introduce any plant or animal.
- 4) deface or write on any rocks, trees or buildings.

These regulations protect the Park for your benefit, the benefit of your children and for future generations.



